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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/605,475	10/01/2003	Timothy John Havens	GEMS 0220 PA	2474
27256	7590	02/09/2005	EXAMINER	
ARTZ & ARTZ, P.C. 28333 TELEGRAPH RD. SUITE 250 SOUTHFIELD, MI 48034			VARGAS, DIXOMARA	
			ART UNIT	PAPER NUMBER
			2859	

DATE MAILED: 02/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/605,475		HAVENS, TIMOTHY JOHN	
	<b>Examiner</b>		<b>Art Unit</b>	
	Dixomara Vargas		2859	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 November 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Drawings*

1. Figure 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance. Applicant has not comply with the objection to the drawings above because no amendment to the drawings was filed.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-6, 8-17 and 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Srinivasan et al. (US 5,543,711 A) in view of Burl et al. (6,593,744 B2).

With respect to claims 1, 12 and 13, Srinivasan discloses an integrated electronic system housing (Figure 1, housings #16, #18 and #20) and magnet structure for an imaging system

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comprising: a magnet structure comprising (Figure 1, the MRI system shown): a superconducting magnet (Column 4, lines 1-8, Figure 1, #10); and an RF coil assembly (Figure 1, coil assembly #40 including for example coils #42 and #44) a housing attached to and external from said magnet structure (Figure 1, vacuum dewar #20 which supports the MRI system and therefore is considered to be the external housing in between the 3 housings available), said housing containing imaging system structure for support electronics (Figure 1, RF integrated processing circuits #62 are considered to be the support electronics and vessel #16, shield #18 and vacuum #20 are consider three types or layers of housings since they support the MRI structure); and a radio frequency shield (Figure 1, whole body RF shield #38) coupled to said housing (Column 4, lines 9-19; shield #38 is mounted within the housing #20).

In addition, Srinivasan discloses the claimed invention as stated above except for the shielding being for preventing radio frequency interference between said imaging system support electronics and said RF coil assembly. However, Burl discloses shielding being for preventing radio frequency interference between said imaging system support electronics and said RF coil assembly (Column 7, lines 37-53). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use Burl's shielding with Srinivasan's integrated electronic system housing and magnet structure for an imaging system for the purpose of isolating the components of the MR system including the RF coils from the circuit system.

4. With respect to claim 2, Srinivasan discloses the shield (#38) is coupled within said housing (#20).

5. With respect to claims 3 and 15, Srinivasan discloses said imaging system support electronics is encased in said radio frequency shield (Figure 1).

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6. With respect to claims 4 and 16, Srinivasan discloses wherein said radio frequency shield is coupled within said housing and encases said imaging system support electronics (Figure 1).
7. With respect to claim 5, Srinivasan discloses wherein said imaging system support electronics comprises at least one of a radio frequency amplifier, a gradient amplifier, a timing device, an oscillator, a radio frequency transmitter, a gradient coil controller and a sequence controller (Column 4, lines 33-40).
8. With respect to claims 6 and 17, Srinivasan discloses wherein the radio frequency shield comprises at least one layer (Figure 1).
9. With respect to claims 8-11 and 19-20, Srinivasan discloses the radio frequency shield is metallic, conductive mesh or a superconductor having at least one void (Column 4, lines 16-18).
10. With respect to claim 14, Srinivasan discloses a second housing (Figure 1, #16) containing said magnet structure (#10), wherein said first housing and said second housing are integrally formed as a single housing (Figure 1, housings #16, #18 and #20).
11. With respect to claim 22, see rejections of claims 1 and 14 above.
12. Claims 7 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Srinivasan et al. (US 5,543,711 A) and Burl et al. (6,593,744 B2) in view of Ladebeck (US 5,994,903 A).

With respect to claims 7 and 18, Srinivasan and Burl disclose the claimed invention as stated above in paragraph 6 except for the at least one layer comprising: a first layer; and a second layer coupled to the first layer; said first layer and said second layer having capacitance therebetween. However, Ladebeck discloses at least one layer comprising: a first layer; and a second layer coupled to the first layer; said first layer and said second layer having capacitance

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therebetween (Figure 2, capacitors #13). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use Ladebeck's shielding structure including capacitors with Srinivasan and Burl's housing for the purpose of short the shield for compensating the magnetic field as shown by Ladebeck (Column 3, lines 50-55).

### *Response to Arguments*

13. Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new ground(s) of rejection.

### *Conclusion*

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dixomara Vargas whose telephone number is (571) 272-2252.


The examiner can normally be reached on 8:00 am. to 4:30 pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on (571) 272-2245. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Dixomara Vargas  
Art Unit 2859  
February 5, 2005

  
**BRIJ SHRIVASTAV**  
**PRIMARY EXAMINER**